IN THE CLAIMS:

Claims 1-68 (Canceled).

69. (Currently Amended) A semiconductor laser device, comprising:

a laser diode stack array including a plurality of emitters which extend long in a first direction of emission of laser beams, the emitters capable of being arranged linearly in the first direction and situated in a plurality of rows, and the emitter adapted to emit a group of laser beams that have laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, the first condenser bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, the first beam converter configured to receive the group of laser beams collimated in the second direction, and emitting the group of laser beams converted to a substantially ladder rung configuration group of laser beams that extend in the first direction for every one of the rows;

a second condenser provided in front of either the first beam converter or a beam compressor, the second condenser adapted for bending ~~and collimating~~ the group of laser beams output from the first beam converter or the first compressor ~~in a second direction substantially at right angles to the first direction for every one of the rows,~~ and adapted for using each of the ~~collimated~~ beams with center axes offset by predetermined

amounts to generate ~~convert the collimated beams to~~ beams that are emitted from approximately the same object by generating an angular change of the optical axes;

a first beam compressor configured for receiving the group of laser beams output from the first beam converter or the second condenser, and emitting the beams converted to a compressed substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the plurality of rows; and

a third condenser configured to condense the group of laser beams output from the first beam compressor.

70. (Previously presented) The semiconductor laser device according to claim 69, further comprising a shifter that is provided between the first beam converter and the second condenser, the shifter being capable of shifting in parallel optical axes in the second direction for each of the rows.

71. (Previously presented) The semiconductor laser device according to claim 69, further comprising a shifter that is provided between the first condenser and the first beam converter, the shifter being adapted for shifting in parallel optical axes in the second direction for each of the rows.

72. (Previously presented) The semiconductor laser device according to claim 69, wherein the second condenser includes a one-dimensional array of cylindrical lenses.

73. (Previously presented) The semiconductor laser device according to claim 69, wherein the beam compressor is comprised of at least one of an anamorphic prism and anamorphic prism pair.

74. (Previously present) The semiconductor laser device according to claim 69, wherein the beam compressor is a telescope that includes at least one of one-dimensional lenses and two-dimensional lenses.

75. (Previously presented) The semiconductor laser device according to claim 69, wherein the beam compressor is a telescope that includes at least one of a one-dimensional parabolic mirror and a two-dimensional parabolic mirror.

76. (Previously presented) The semiconductor laser device according to claim 69, wherein the first condenser is a one-dimensional array of cylindrical lenses.

77. (Previously presented) The semiconductor laser device according to claim 69, further comprising an angle adjuster provided in front of the first condenser, the angle adjuster being configured for finely adjusting the angle of optical axes for each of the rows to the second direction.

78. (Previously presented) The semiconductor laser device according to claim 77, wherein the angle adjuster combines at least two wedge plates in reverse directions, and capable of rotating at least one of the wedge plates.

79. (Previously presented) The semiconductor laser device according to claim 69, further comprising:

at least two laser diode stack arrays which are provided behind the first condenser; and

an optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser that are provided in front of the condenser.

80. (Previously presented) The semiconductor laser device according to claim 79, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

81. (Previously presented) The semiconductor laser device according to claim 79, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

82. (Previously presented) The semiconductor laser device according to claim 79, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

83. (Previously presented) The semiconductor laser device according to claim 69, further comprising a beam converter including a plurality of optical elements, each of the elements including:

a. a receiving part adapted to receive incident light beams having cross-sections provided along first axes perpendicular to the optical axes,

b. an optical system adapted to rotate the first axis of the beam cross-sections to substantially right angles, and

c. an emission part adapted to emit emitted beams passing through the optical system, wherein the optical elements are arranged on the optical axes of the laser beams, and the receiving and emission parts of the optical elements are arranged adjoining each other two-dimensionally on the same planes.

84. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is a space defined by reflecting faces, the space providing :

i. a first reflecting face vertical and inclined about 45° with respect to incident beams,

ii. a second reflecting face parallel to the incident beams and inclined about 45° with respect to the horizontal plane, and

iii. a third reflecting face perpendicular to the vertical surface parallel to the incident beams, parallel to the line of intersection between the first reflecting face and second reflecting face, and inclined about 45° with respect to the horizontal plane.

85. (Previously presented) The semiconductor laser device according to claim 83,

wherein the optical element is a prism comprised of a first total reflecting face, a second total reflecting face, a third total reflecting face, an incidence face, an emission face, and a joining face,

wherein the first, second, and third total reflecting faces intersect each other with an intersecting angles of 60°, the incidence face and emission face are parallel and perpendicularly intersect the second total reflecting face and are inclined about 45° with respect to the first and third total reflecting faces, and the joining face is parallel to the second total reflecting face, and

wherein one of a one-dimensional array of prisms comprised of prisms are arranged adjoining each other with the third total reflecting faces, incidence faces, and emission faces on the same planes and with joining faces and second total reflecting faces of adjoining prisms joined together and a two-dimensional array comprised of one-dimensional arrays of prisms further aligned in parallel is used as the beam converter.

86. (Previously presented) The semiconductor laser device according to claim 83, wherein one of an optical glass member having parallel first and second flat surfaces, a third flat surface intersecting the first flat surface by an angle of 135°, and a fourth surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are form continuously in a wave configuration in a direction intersecting the first flat surface by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the third flat surface, the first flat surface being used as an incidence face, the second flat surface being used as an

emission face, the faces of the bent faces forming the fourth surface intersecting the first flat surface by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the third flat surface being used as a third reflecting face, and a one-dimensional array comprised of the optical glass members further aligned linearly is used as a beam converter.

87. (Previously presented) The semiconductor laser device according to claim 83, wherein one of a mirror structure having a first flat surface intersecting a flat surface perpendicular to an incidence optical axis by an angle of 135°, a second surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are formed continuously in a wave configuration in a direction intersecting a flat surface perpendicular to the incidence optical axis by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the first flat surface, the first flat surface and the second surface being treated to form mirror surfaces, the faces among the bent faces forming the second surface intersecting the flat surface perpendicular to the incidence optical axis by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the first flat surface being used as a third reflecting face, and a one-dimensional array comprised of the mirror structures further aligned linearly is used as a beam converter.

88. (Previously Presented) The semiconductor laser device according to claim 83, wherein the optical element is comprised of a pair of convex cylindrical lenses, each of

the lenses having axes inclined about 45° arranged facing each other across a space of a predetermined distance.

89. (Previously presented) The semiconductor laser device according to claim 88, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

90. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is comprised of an array of a plurality of pairs of convex cylindrical lenses, each of the lenses having an axes inclined about 45° arranged facing each other across a space of a predetermined distance.

91. (Previously presented) The semiconductor laser device according to claim 90, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

92. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is a cylindrical lens having convex lens parts at the two ends of the side faces, and wherein a plurality of optical elements are joined inclined by about 45° with respect to an incidence optical axis.

93. (Previously presented) The semiconductor laser device according to claim 92, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

94. (Previously presented) The semiconductor laser device according to claim 83, wherein the beam converter is a one-dimensional array of a plurality of cylindrical lenses having convex lens parts at the two ends of the side faces joined inclined by about 45° with respect to an incidence optical axis.

95. (Previously presented) The semiconductor laser device according to claim 94, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

96. (Previously presented) The semiconductor laser device according to claim 83, wherein the beam converter is comprised of an optical glass prism having a rectangular cross-section formed with a plurality of cylindrical surfaces inclined about 45° in the same direction as its incidence face and emission face, and wherein the converter emits incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

97. (Previously presented) The semiconductor laser device according to claim 96, wherein a radius of curvature of emission side surfaces is smaller than a radius of curvature of incidence side surfaces in the cylindrical surfaces, and wherein the angle of

inclination is adjustable to emit incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

98. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is a dub prism having a trapezoidal cross-section and a plurality of the optical elements is arranged inclined by about 45°.

99. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is comprised of two optical elements changing in power in only a direction approximately perpendicular to a center axis due to diffraction and arranged with center axes inclined about 45°.

100. (Previously presented) The semiconductor laser device according to claim 83, wherein, at the incidence side and the emission side, the beam converter is comprised of a pair of binary optic elements arranged facing each other across a space of a predetermined distance, the surfaces of the incidence side binary optic element and emission side binary optic element being formed with pluralities of axially symmetric stepped surfaces changing in depth so that the powers change symmetric to center axes inclined about 45° in directions perpendicular to the center axes, and emits incident beams entering the axially symmetric stepped surfaces rotated about 90° in cross-section.

101. (Previously presented) The semiconductor laser device according to claim 83, wherein the optical element is comprised of an optical element comprised of a structure with continuously changing refractive indexes and changing in power only in a direction approximately perpendicular to the orientation of arrangement and is arranged inclined 45° with respect to a horizontal plane.

102. (Previously presented) The semiconductor laser device according to claim 83, wherein the beam converter is comprised of a plurality of one-dimensional profile refractive index lens elements comprised of optical glass members with refractive indexes highest at the center faces and becoming lower the closer to the side faces and joined with the center faces inclined about 45° with respect to a horizontal plane.

103. (Previously presented) The semiconductor laser device according to claim 83, wherein the beam converter is comprised of an optical glass plate on both surfaces of which are formed pluralities of semicylindrical profile refractive index lens elements inclined about 45° with respect to those surfaces, arranged facing each other in the same direction, and having refractive indexes highest at the centers of the semicylinders and the refractive indexes becoming lower the further to the outsides.

104. (Previously presented) The semiconductor laser device according to claim 69, further comprising:

at least two laser diode stack arrays; and

an optical device adapted for wavelength coupling the at least two groups of laser beams entering the third condenser after the first condenser.

105. (Previously presented) The semiconductor laser device according to claim 104, wherein the optical device is a dichroic mirror.

106. (Previously presented) The semiconductor laser device according to claim 69, further comprising:

at least three laser diode stack arrays provided behind the first condenser;

a first optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser received in front of the first condenser; and

a second optical device adapted for wavelength coupling at least two groups of laser beams entering the third condenser after the first condenser.

107. (Previously presented) The semiconductor laser device according to claim 106, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

108. (Previously presented) The semiconductor laser device according to claim 106, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

109. (Previously presented) The semiconductor laser device according to claim 106, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

110. (Previously presented) The semiconductor laser device according to claim 106, wherein the optical device is a dichroic mirror.

111. (Previously presented) The semiconductor laser device according to claim 69, further comprising an optical fiber having an end face at a focal plane of the third condenser.

112. (Previously presented) The semiconductor laser device according to claim 111, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

113. (Previously presented) The semiconductor laser device according to claim 111, wherein the laser device is a semiconductor laser pumped solid-state laser device, wherein the optical system is capable of collimating the beams emitted from the optical fiber so as to converge the beams to the focal point, and further comprising a solid-state laser element having a pumped light receiving face that is matched with a position of the focal point

114. (Previously presented) The semiconductor laser device according to claim 113, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

115. (Previously presented) The semiconductor laser device according to claim 69, wherein the laser device is a semiconductor laser pumped solid-state laser device, and further comprising a solid-state laser element which has a pumped light receiving face approximately matched with a focal position of the third condenser.

116. ((Currently Amended) A semiconductor laser device, comprising:

an arrangement which is at least one of:

a. a laser diode stack array which includes a plurality of emitters that extend long in a first direction of an emission of laser beams, the emitters capable of being arranged linearly in the first direction and situated in a plurality of rows, the emitters being adapted to emit a group of laser beams having laser beam elements arranged in a two-dimensional array, and

b. a laser diode stack array which includes the emitters which extend long in the first direction of emission of laser beams, the emitters capable of being arranged linearly densely in the first direction and situated in the rows, the emitters capable of emitting the group of laser beams comprised of laser beams substantially continuing linearly arranged in the rows;

a first condenser situated in front of the laser diode stack array, and configured for bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter situated in front of the first condenser, the first beam converter adapted for dividing the group of laser beams in each one of the rows, providing

optical elements in each of the rows in parallel so as to bend the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided laser beams, receiving the group of laser beams collimated in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided laser beams as units;

a second condenser situated in front of either the first beam converter or a first beam compressor, the second condenser capable of bending ~~and collimating~~ the group of laser beams output from the first beam converter or the first beam compressor ~~in a second direction substantially at right angles to the first direction for every one of the rows,~~ and using ~~each of~~ the group of laser beams with center axes offset by predetermined amounts to convert the laser beams to beams emitted from approximately the same object by generating an angular change of the optical axes;

~~a~~ the first beam compressor configured to receive an output of the group of laser beams from either the first beam converter or the second condenser, and emit the output converted to a substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the rows; and

a third condenser adapted for condensing the group of laser beams output from the first beam compressor.

117. (Previously presented) The semiconductor laser device according to claim 116, further comprising a shifter that is provided between the first beam converter and the

second condenser, the shifter being capable of shifting in parallel optical axes in the second direction for each of the rows.

118. (Previously presented) The semiconductor laser device according to claim 116, further comprising a shifter that is provided between the first condenser and the first beam converter, the shifter being adapted for shifting in parallel optical axes in the second direction for each of the rows.

119. (Previously presented) The semiconductor laser device according to claim 116, wherein the second condenser includes a one-dimensional array of cylindrical lenses.

120. (Previously presented) The semiconductor laser device according to claim 116, wherein the beam compressor is comprised of at least one of an anamorphic prism and anamorphic prism pair.

121. (Previously presented) The semiconductor laser device according to claim 116, wherein the beam compressor is a telescope that includes at least one of one-dimensional lenses and two-dimensional lenses.

122. (Previously presented) The semiconductor laser device according to claim 116, wherein the beam compressor is a telescope that includes at least one of a one-dimensional parabolic mirror and a two-dimensional parabolic mirror.

123. (Previously presented) The semiconductor laser device according to claim 116, wherein the first condenser is a one-dimensional array of cylindrical lenses.

124. (Previously presented) The semiconductor laser device according to claim 116, further comprising an angle adjuster provided in front of the first condenser, the angle adjuster being configured for finely adjusting the angle of optical axes for each of the rows to the second direction.

125. (Previously presented) The semiconductor laser device according to claim 124, wherein the angle adjuster combines at least two wedge plates in reverse directions, and capable of rotating at least one of the wedge plates.

126. (Previously presented) The semiconductor laser device according to claim 116, further comprising:

at least two laser diode stack arrays which are provided behind the first condenser; and

an optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser that are provided in front of the condenser.

127. (Previously presented) The semiconductor laser device according to claim 126, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

128. (Previously presented) The semiconductor laser device according to claim 126, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

129. (Previously presented) The semiconductor laser device according to claim 126, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

130. (Previously presented) The semiconductor laser device according to claim 116, further comprising:

at least two laser diode stack arrays; and

an optical device adapted for wavelength coupling the at least two groups of laser beams entering the third condenser after the first condenser.

131. (Previously presented) The semiconductor laser device according to claim 116, wherein the optical device is a dichroic mirror.

132. (Previously presented) The semiconductor laser device according to claim 116, further comprising:

at least three laser diode stack arrays provided behind the first condenser;

a first optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser received in front of the first condenser; and

a second optical device adapted for wavelength coupling at least two groups of laser beams entering the third condenser after the first condenser.

133. (Previously presented) The semiconductor laser device according to claim 132, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

134. (Previously presented) The semiconductor laser device according to claim 132, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

135. (Previously presented) The semiconductor laser device according to claim 132, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

136. (Previously presented) The semiconductor laser device according to claim 132, wherein the optical device is a dichroic mirror.

137. (Previously presented) The semiconductor laser device according to claim 95, further comprising an optical fiber having an end face at a focal plane of the third condenser.

138. (Previously presented) The semiconductor laser device according to claim 137, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

139. (Previously presented) The semiconductor laser device according to claim 137, wherein the laser device is a semiconductor laser pumped solid-state laser device, wherein the optical system is capable of collimating the beams emitted from the optical fiber so as to converge the beams to the focal point, and further comprising a solid-state laser element having a pumped light receiving face that is matched with a position of the focal point

140. (Previously presented) The semiconductor laser device according to claim 139, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

141. (Previously presented) The semiconductor laser device according to claim 116, wherein the laser device is a semiconductor laser pumped solid-state laser device, and further comprising a solid-state laser element which has a pumped light receiving face approximately matched with a focal position of the third condenser.

142. (Currently Amended) The semiconductor laser device according to claim 116, further comprising a beam converter including a plurality of optical elements, each of the elements including:

~~d.~~ a. a receiving part adapted to receive incident light beams having cross-sections provided along first axes perpendicular to the optical axes,

~~e.~~ b. an optical system adapted to rotate the first axis of the beam cross-sections to substantially right angles, and

~~f.~~ c. an emission part adapted to emit emitted beams passing through the optical system, wherein the optical elements are arranged on the optical axes of the laser beams, and the receiving and emission parts of the optical elements are arranged adjoining each other two-dimensionally on the same planes.

143. (Currently Amended) The semiconductor laser device according to claim 142, wherein the optical element is a space defined by reflecting faces, the space providing :

~~iv.~~ i. a first reflecting face vertical and inclined about 45° with respect to incident beams,

~~v.~~ ii. a second reflecting face parallel to the incident beams and inclined about 45° with respect to the horizontal plane, and

~~vi.~~ iii. a third reflecting face perpendicular to the vertical surface parallel to the incident beams, parallel to the line of intersection between the first reflecting face and second reflecting face, and inclined about 45° with respect to the horizontal plane.

144. (Previously presented) The semiconductor laser device according to claim 142,

wherein the optical element is a prism comprised of a first total reflecting face, a second total reflecting face, a third total reflecting face, an incidence face, an emission face, and a joining face,

wherein the first, second, and third total reflecting faces intersect each other with an intersecting angles of 60°, the incidence face and emission face are parallel and perpendicularly intersect the second total reflecting face and are inclined about 45° with respect to the first and third total reflecting faces, and the joining face is parallel to the second total reflecting face, and

wherein one of a one-dimensional array of prisms comprised of prisms are arranged adjoining each other with the third total reflecting faces, incidence faces, and emission faces on the same planes and with joining faces and second total reflecting faces of adjoining prisms joined together and a two-dimensional array comprised of one-dimensional arrays of prisms further aligned in parallel is used as the beam converter.

145. (Previously presented) The semiconductor laser device according to claim 142, wherein one of an optical glass member having parallel first and second flat surfaces, a third flat surface intersecting the first flat surface by an angle of 135°, and a fourth surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are form continuously in a wave configuration in a direction intersecting the first flat surface by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the third flat surface, the first flat

surface being used as an incidence face, the second flat surface being used as an emission face, the faces of the bent faces forming the fourth surface intersecting the first flat surface by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the third flat surface being used as a third reflecting face, and a one-dimensional array comprised of the optical glass members further aligned linearly is used as a beam converter.

146. (Previously presented) The semiconductor laser device according to claim 142, wherein one of a mirror structure having a first flat surface intersecting a flat surface perpendicular to an incidence optical axis by an angle of 135°, a second surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are formed continuously in a wave configuration in a direction intersecting a flat surface perpendicular to the incidence optical axis by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the first flat surface, the first flat surface and the second surface being treated to form mirror surfaces, the faces among the bent faces forming the second surface intersecting the flat surface perpendicular to the incidence optical axis by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the first flat surface being used as a third reflecting face, and a one-dimensional array comprised of the mirror structures further aligned linearly is used as a beam converter.

147. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is comprised of a pair of convex cylindrical lenses, each of the lenses having axes inclined about 45° arranged facing each other across a space of a predetermined distance.

148. (Previously presented) The semiconductor laser device according to claim 147, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

149. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is comprised of an array of a plurality of pairs of convex cylindrical lenses, each of the lenses having an axes inclined about 45° arranged facing each other across a space of a predetermined distance.

150. (Previously presented) The semiconductor laser device according to claim 149, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

151. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is a cylindrical lens having convex lens parts at the two ends of the side faces, and wherein a plurality of optical elements are joined inclined by about 45° with respect to an incidence optical axis.

152. (Previously presented) The semiconductor laser device according to claim 151, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

153. (Previously presented) The semiconductor laser device according to claim 142, wherein the beam converter is a one-dimensional array of a plurality of cylindrical lenses having convex lens parts at the two ends of the side faces joined inclined by about 45° with respect to an incidence optical axis.

154. (Previously presented) The semiconductor laser device according to claim 153, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

155. (Previously presented) The semiconductor laser device according to claim 142, wherein the beam converter is comprised of an optical glass prism having a rectangular cross-section formed with a plurality of cylindrical surfaces inclined about 45° in the same direction as its incidence face and emission face, and wherein the converter emits incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

156. (Previously presented) The semiconductor laser device according to claim 155, wherein a radius of curvature of emission side surfaces is smaller than a radius of curvature of incidence side surfaces in the cylindrical surfaces, and wherein the angle of

inclination is adjustable to emit incident beams entering its cylindrical surfaces rotated about 90° in cross-section.\

157. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is a dub prism having a trapezoidal cross-section and a plurality of the optical elements is arranged inclined by about 45°.

158. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is comprised of two optical elements changing in power in only a direction approximately perpendicular to a center axis due to diffraction and arranged with center axes inclined about 45°.

159. (Previously presented) The semiconductor laser device according to claim 142, wherein, at the incidence side and the emission side, the beam converter is comprised of a pair of binary optic elements arranged facing each other across a space of a predetermined distance, the surfaces of the incidence side binary optic element and emission side binary optic element being formed with pluralities of axially symmetric stepped surfaces changing in depth so that the powers change symmetric to center axes inclined about 45° in directions perpendicular to the center axes, and emits incident beams entering the axially symmetric stepped surfaces rotated about 90° in cross-section.

160. (Previously presented) The semiconductor laser device according to claim 142, wherein the optical element is comprised of an optical element comprised of a structure with continuously changing refractive indexes and changing in power only in a direction approximately perpendicular to the orientation of arrangement and is arranged inclined 45° with respect to a horizontal plane.

161. (Previously presented) The semiconductor laser device according to claim 142, wherein the beam converter is comprised of a plurality of one-dimensional profile refractive index lens elements comprised of optical glass members with refractive indexes highest at the center faces and becoming lower the closer to the side faces and joined with the center faces inclined about 45° with respect to a horizontal plane.

162. (Previously presented) The semiconductor laser device according to claim 142, wherein the beam converter is comprised of an optical glass plate on both surfaces of which are formed pluralities of semicylindrical profile refractive index lens elements inclined about 45° with respect to those surfaces, arranged facing each other in the same direction, and having refractive indexes highest at the centers of the semicylinders and the refractive indexes becoming lower the further to the outsides.

163. (Currently Amended) A semiconductor laser device, comprising:

a laser diode stack array including a plurality of emitters which extend in a first direction of emission of laser beams, the emitters capable of being arranged linearly in the first direction and situated along a plurality of rows, the emitters being configured to

emit a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser situated in front of the laser diode stack array, and capable of bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter situated in front of the first condenser, the first beam converter adapted for receiving the group of laser beams collimated in the second direction, and emitting the group of beams converted to a substantially ladder rung configuration group of laser beams extending in the first direction for every row;

a second condenser situated in front of either the first beam converter or a first beam compressor, and configured to bend ~~and collimate~~ the group of laser beams output from the first beam converter or the first beam compressor in a second direction substantially at right angles to the first direction for every row;

~~a~~ the first beam compressor capable of receiving the group of laser beams output from the first beam converter or the second condenser, and emitting the laser beams converted to a compressed substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the rows;

an angle changer situated in front of one of the second condenser and the first beam compressor, the angle changer capable of receiving the substantially ladder rung configuration group of laser beams extending in the first direction of the rows, and changing the center optical axes of the group of beams to the second direction for each row to obtain a group of beams emitted from substantially the same object; and

a third condenser adapted for condensing the group of laser beams changed in center optical axes.

164. (Previously presented) The semiconductor laser device according to claim 163, further comprising a shifter that is provided between the first beam converter and the second condenser, the shifter being capable of shifting in parallel optical axes in the second direction for each of the rows.

165. (Previously presented) The semiconductor laser device according to claim 163, further comprising a shifter that is provided between the first condenser and the first beam converter, the shifter being adapted for shifting in parallel optical axes in the second direction for each of the rows.

166. (Previously presented) The semiconductor laser device according to claim 163, wherein the second condenser includes a one-dimensional array of cylindrical lenses.

167. (Previously presented) The semiconductor laser device according to claim 163, wherein the beam compressor is comprised of at least one of an anamorphic prism and anamorphic prism pair.

168. (Previously presented) The semiconductor laser device according to claim 163, wherein the beam compressor is a telescope that includes at least one of one-dimensional lenses and two-dimensional lenses.

169. (Previously presented) The semiconductor laser device according to claim 163, wherein the beam compressor is a telescope that includes at least one of a one-dimensional parabolic mirror and a two-dimensional parabolic mirror.

170. (Previously presented) The semiconductor laser device according to claim 163, wherein the first condenser is a one-dimensional array of cylindrical lenses.

171. (Previously presented) The semiconductor laser device according to claim 163, further comprising an angle adjuster provided in front of the first condenser, the angle adjuster being configured for finely adjusting the angle of optical axes for each of the rows to the second direction.

172. (Previously presented) The semiconductor laser device according to claim 171, wherein the angle adjuster combines at least two wedge plates in reverse directions, and capable of rotating at least one of the wedge plates.

173. (Previously presented) The semiconductor laser device according to claim 163, further comprising:

at least two laser diode stack arrays which are provided behind the first condenser; and

an optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser that are provided in front of the condenser.

174. (Previously presented) The semiconductor laser device according to claim 173, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

175. (Previously presented) The semiconductor laser device according to claim 173, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

176. (Previously presented) The semiconductor laser device according to claim 173, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

177. (Previously presented) The semiconductor laser device according to claim 163, further comprising:

at least two laser diode stack arrays; and

an optical device adapted for wavelength coupling the at least two groups of laser beams entering the third condenser after the first condenser.

178. (Previously presented) The semiconductor laser device according to claim 163, wherein the optical device is a dichroic mirror.

179. (Previously presented) The semiconductor laser device according to claim 163, further comprising:

at least three laser diode stack arrays provided behind the first condenser;

a first optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser received in front of the first condenser; and

a second optical device adapted for wavelength coupling at least two groups of laser beams entering the third condenser after the first condenser.

180. (Previously presented) The semiconductor laser device according to claim 181, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

181. (Previously presented) The semiconductor laser device according to claim 179, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

182. (Previously presented) The semiconductor laser device according to claim 179, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

183. (Previously presented) The semiconductor laser device according to claim 179, wherein the optical device is a dichroic mirror.

184. (Previously presented) The semiconductor laser device according to claim 163, further comprising an optical fiber having an end face at a focal plane of the third condenser.

185. (Previously presented) The semiconductor laser device according to claim 184, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

186. (Previously presentedThe semiconductor laser device according to claim 184, wherein the laser device is a semiconductor laser pumped solid-state laser device, wherein the optical system is capable of collimating the beams emitted from the optical fiber so as to converge the beams to the focal point, and further comprising a solid-state laser element having a pumped light receiving face that is matched with a position of the focal point

187. (Previously presented) The semiconductor laser device according to claim 186, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

188. (Previously presented) The semiconductor laser device according to claim 163, wherein the laser device is a semiconductor laser pumped solid-state laser device, and further comprising a solid-state laser element which has a pumped light receiving face approximately matched with a focal position of the third condenser.

189. (Previously presented) The semiconductor laser device according to claim 163, wherein the angle changer is integrally formed with one of the second condenser and the first beam converter.

190. (Previously presented) The semiconductor laser device according to claim 163, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

191. (Previously presented) The semiconductor laser device according to claim 163, wherein the angle changer is an array of cylindrical lenses.

192. (Previously presented) The semiconductor laser device according to claim 163, wherein the angle changer is a segment type reflection mirror.

193. (Currently Amended) The semiconductor laser device according to claim 163, further comprising a beam converter including a plurality of optical elements, each of the elements including:

~~g.~~ a. a receiving part adapted to receive incident light beams having cross-sections provided along first axes perpendicular to the optical axes,

~~h.~~ b. an optical system adapted to rotate the first axis of the beam cross-sections to substantially right angles, and

~~i.~~ c. an emission part adapted to emit emitted beams passing through the optical system, wherein the optical elements are arranged on the optical axes of the laser beams, and the receiving and emission parts of the optical elements are arranged adjoining each other two-dimensionally on the same planes.

194. (Currently Amended) The semiconductor laser device according to claim 193, wherein the optical element is a space defined by reflecting faces, the space providing :

~~vii.~~ i. a first reflecting face vertical and inclined about 45° with respect to incident beams,

~~viii.~~ ii. a second reflecting face parallel to the incident beams and inclined about 45° with respect to the horizontal plane, and

~~ix.~~ iii. a third reflecting face perpendicular to the vertical surface parallel to the incident beams, parallel to the line of intersection between the first reflecting face and second reflecting face, and inclined about 45° with respect to the horizontal plane.

195. (Previously presented) The semiconductor laser device according to claim 193,

wherein the optical element is a prism comprised of a first total reflecting face, a second total reflecting face, a third total reflecting face, an incidence face, an emission face, and a joining face,

wherein the first, second, and third total reflecting faces intersect each other with an intersecting angles of 60°, the incidence face and emission face are parallel and perpendicularly intersect the second total reflecting face and are inclined about 45° with respect to the first and third total reflecting faces, and the joining face is parallel to the second total reflecting face, and

wherein one of a one-dimensional array of prisms comprised of prisms are arranged adjoining each other with the third total reflecting faces, incidence faces, and emission faces on the same planes and with joining faces and second total reflecting faces of adjoining prisms joined together and a two-dimensional array comprised of one-dimensional arrays of prisms further aligned in parallel is used as the beam converter.

196. (Previously presented) The semiconductor laser device according to claim 193, wherein one of an optical glass member having parallel first and second flat surfaces, a third flat surface intersecting the first flat surface by an angle of 135°, and a fourth surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are form continuously in a wave configuration in a direction intersecting the first flat surface by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the third flat surface, the first flat surface being used as an incidence face, the second flat surface being used as an emission face, the faces of the bent faces forming the fourth surface intersecting the first flat surface by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the third flat surface being used as a third reflecting

face, and a one-dimensional array comprised of the optical glass members further aligned linearly is used as a beam converter.

197. (Previously presented) The semiconductor laser device according to claim 193, wherein one of a mirror structure having a first flat surface intersecting a flat surface perpendicular to an incidence optical axis by an angle of 135°, a second surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are formed continuously in a wave configuration in a direction intersecting a flat surface perpendicular to the incidence optical axis by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the first flat surface, the first flat surface and the second surface being treated to form mirror surfaces, the faces among the bent faces forming the second surface intersecting the flat surface perpendicular to the incidence optical axis by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the first flat surface being used as a third reflecting face, and a one-dimensional array comprised of the mirror structures further aligned linearly is used as a beam converter.

198. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is comprised of a pair of convex cylindrical lenses, each of the lenses having axes inclined about 45° arranged facing each other across a space of a predetermined distance.

199. (Previously presented) The semiconductor laser device according to claim 198, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

200. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is comprised of an array of a plurality of pairs of convex cylindrical lenses, each of the lenses having an axes inclined about 45° arranged facing each other across a space of a predetermined distance.

201. (Previously presented) The semiconductor laser device according to claim 200, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

202. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is a cylindrical lens having convex lens parts at the two ends of the side faces, and wherein a plurality of optical elements are joined inclined by about 45° with respect to an incidence optical axis.

203. (Previously presented) The semiconductor laser device according to claim 202, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

204. (Previously presented) The semiconductor laser device according to claim 193, wherein the beam converter is a one-dimensional array of a plurality of cylindrical lenses having convex lens parts at the two ends of the side faces joined inclined by about 45° with respect to an incidence optical axis.

205. (Previously presented) The semiconductor laser device according to claim 204, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

206. (Previously presented) The semiconductor laser device according to claim 193, wherein the beam converter is comprised of an optical glass prism having a rectangular cross-section formed with a plurality of cylindrical surfaces inclined about 45° in the same direction as its incidence face and emission face, and wherein the converter emits incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

207. (Previously presented) The semiconductor laser device according to claim 206, wherein a radius of curvature of emission side surfaces is smaller than a radius of curvature of incidence side surfaces in the cylindrical surfaces, and wherein the angle of inclination is adjustable to emit incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

208. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is a dub prism having a trapezoidal cross-section and a plurality of the optical elements is arranged inclined by about 45°.

209. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is comprised of two optical elements changing in power in only a direction approximately perpendicular to a center axis due to diffraction and arranged with center axes inclined about 45°.

210. (Previously presented) The semiconductor laser device according to claim 193, wherein, at the incidence side and the emission side, the beam converter is comprised of a pair of binary optic elements arranged facing each other across a space of a predetermined distance, the surfaces of the incidence side binary optic element and emission side binary optic element being formed with pluralities of axially symmetric stepped surfaces changing in depth so that the powers change symmetric to center axes inclined about 45° in directions perpendicular to the center axes, and emits incident beams entering the axially symmetric stepped surfaces rotated about 90° in cross-section.

211. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is comprised of an optical element comprised of a structure with continuously changing refractive indexes and changing in power only in a direction

approximately perpendicular to the orientation of arrangement and is arranged inclined 45° with respect to a horizontal plane.

212. (Previously presented) The semiconductor laser device according to claim 193, wherein the beam converter is comprised of a plurality of one-dimensional profile refractive index lens elements comprised of optical glass members with refractive indexes highest at the center faces and becoming lower the closer to the side faces and joined with the center faces inclined about 45° with respect to a horizontal plane.

213. (Previously presented) The semiconductor laser device according to claim 193, wherein the beam converter is comprised of an optical glass plate on both surfaces of which are formed pluralities of semicylindrical profile refractive index lens elements inclined about 45° with respect to those surfaces, arranged facing each other in the same direction, and having refractive indexes highest at the centers of the semicylinders and the refractive indexes becoming lower the further to the outsides.

214. (Currently Amended) A semiconductor laser device comprising:

an arrangement which includes at least one of:

i. a laser diode stack array provided which includes a plurality of emitters, the transmitters extending long in a first direction of emission of laser beams, arranged linearly in the first direction and provided in a plurality of rows, the transmitters capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array provided with a plurality of further emitters, the further transmitter extending long in a first direction of emission of laser beams, arranged linearly densely in the first direction and provided in a plurality of rows, the further transmitter capable of emitting a group of laser beams comprised of laser beams substantially continuing linearly arranged in a plurality of rows;

a first condenser provided in front of the laser diode stack array, the first condenser being capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, the first beam converter dividing the group of laser beams in each row, and including in each row in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided pluralities of laser beams, the first beam converter capable of receiving the group of laser beams collimated in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a second condenser provided in front of either the first beam converter or a first beam compressor, the second condenser capable of bending ~~and collimating~~ the group of laser beams output from the first beam converter or the first beam compressor ~~in a second direction substantially at right angles to the first direction for every row;~~

a first beam compressor capable of receiving the laser beams output from the first beam converter or the second condenser, and emitting the laser beams converted to a substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the plurality of rows;

an angle changer provided in front of one of the second condenser and the first beam compressor, the angle changer capable of receiving the substantially ladder rung configuration group of laser beams extending in the first direction of the plurality of rows, and changing the center optical axes of the group of beams to the second direction for each of the rows to obtain a group of beams emitted from substantially the same object; and

a third condenser configured for condensing the group of laser beams.

215. (Previously presented) The semiconductor laser device according to claim 214, further comprising a shifter that is provided between the first beam converter and the second condenser, the shifter being capable of shifting in parallel optical axes in the second direction for each of the rows.

216. (Previously presented) The semiconductor laser device according to claim 214, further comprising a shifter that is provided between the first condenser and the first beam converter, the shifter being adapted for shifting in parallel optical axes in the second direction for each of the rows.

217. (Previously presented) The semiconductor laser device according to claim 214, wherein the second condenser includes a one-dimensional array of cylindrical lenses.

218. (Previously present) The semiconductor laser device according to claim 214, wherein the beam compressor is comprised of at least one of an anamorphic prism and anamorphic prism pair.

219. (Previously presented) The semiconductor laser device according to claim 214, wherein the beam compressor is a telescope that includes at least one of one-dimensional lenses and two-dimensional lenses.

220. (Previously presented) The semiconductor laser device according to claim 214, wherein the beam compressor is a telescope that includes at least one of a one-dimensional parabolic mirror and a two-dimensional parabolic mirror.

221. (Previously presented) The semiconductor laser device according to claim 214, wherein the first condenser is a one-dimensional array of cylindrical lenses.

222. (Previously presented) The semiconductor laser device according to claim 214, further comprising an angle adjuster provided in front of the first condenser, the angle adjuster being configured for finely adjusting the angle of optical axes for each of the rows to the second direction.

223. (Previously presented) The semiconductor laser device according to claim 222, wherein the angle adjuster combines at least two wedge plates in reverse directions, and capable of rotating at least one of the wedge plates.

224. (Previously presented) The semiconductor laser device according to claim 214, further comprising:

at least two laser diode stack arrays which are provided behind the first condenser; and

an optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser that are provided in front of the condenser.

225. (Previously presented) The semiconductor laser device according to claim 224, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

226. (Previously presented) The semiconductor laser device according to claim 224, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

227. (Previously presented) The semiconductor laser device according to claim 224, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

228. (Previously presented) The semiconductor laser device according to claim 214, further comprising:

at least two laser diode stack arrays; and

an optical device adapted for wavelength coupling the at least two groups of laser beams entering the third condenser after the first condenser.

229. (Previously presented) The semiconductor laser device according to claim 214, wherein the optical device is a dichroic mirror.

230. (Previously presented) The semiconductor laser device according to claim 214, further comprising:

at least three laser diode stack arrays provided behind the first condenser;

a first optical device adapted for coupling the at least two groups of laser beams emitted from the first condenser received in front of the first condenser; and

a second optical device adapted for wavelength coupling at least two groups of laser beams entering the third condenser after the first condenser.

231. (Previously presented) The semiconductor laser device according to claim 230, wherein the optical device is a mirror formed with through windows at approximately the same pitch as a stack pitch of the laser diode stack array.

232. (Previously presented) The semiconductor laser device according to claim 230, wherein the optical device is comprised of mirrors arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

233. (Previously presented) The semiconductor laser device according to claim 230, wherein the optical device is comprised of right angle prisms arranged at approximately the same pitch as a stack pitch of the laser diode stack array.

234. (Previously presented) The semiconductor laser device according to claim 230, wherein the optical device is a dichroic mirror.

235. (Previously presented) The semiconductor laser device according to claim 214, further comprising an optical fiber having an end face at a focal plane of the third condenser.

236. (Previously presented) The semiconductor laser device according to claim 235, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

237. (Previously presented) The semiconductor laser device according to claim 236, wherein the laser device is a semiconductor laser pumped solid-state laser device, wherein the optical system is capable of collimating the beams emitted from the optical fiber so as to converge the beams to the focal point, and further comprising a solid-state

laser element having a pumped light receiving face that is matched with a position of the focal point

238. (Previously presented) The semiconductor laser device according to claim 237, wherein the optical fiber is an optical fiber having a core doped with a rare earth element.

239. (Previously presented) The semiconductor laser device according to claim 214, wherein the laser device is a semiconductor laser pumped solid-state laser device, and further comprising a solid-state laser element which has a pumped light receiving face approximately matched with a focal position of the third condenser.

240. (Previously presented) The semiconductor laser device according to claim 214, wherein the angle changer is integrally formed with one of the second condenser and the first beam converter.

241. (Previously presented) The semiconductor laser device according to claim 214, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

242. (Previously presented) The semiconductor laser device according to claim 214, wherein the angle changer is an array of cylindrical lenses.

243. (Previously presented) The semiconductor laser device according to claim 214, wherein the angle changer is a segment type reflection mirror.

244. (Currently Amended) The semiconductor laser device according to claim 214, further comprising a beam converter including a plurality of optical elements, each of the elements including:

~~j.~~ a. a receiving part adapted to receive incident light beams having cross-sections provided along first axes perpendicular to the optical axes,

~~k.~~ b. an optical system adapted to rotate the first axis of the beam cross-sections to substantially right angles, and

~~l.~~ c. an emission part adapted to emit emitted beams passing through the optical system, wherein the optical elements are arranged on the optical axes of the laser beams, and the receiving and emission parts of the optical elements are arranged adjoining each other two-dimensionally on the same planes.

245. (Currently Amended) The semiconductor laser device according to claim 244, wherein the optical element is a space defined by reflecting faces, the space providing :

~~x.~~ i. a first reflecting face vertical and inclined about 45° with respect to incident beams,

~~xi.~~ ii. a second reflecting face parallel to the incident beams and inclined about 45° with respect to the horizontal plane, and

~~xii.~~ iii. a third reflecting face perpendicular to the vertical surface parallel to the incident beams, parallel to the line of intersection between the first reflecting face and second reflecting face, and inclined about 45° with respect to the horizontal plane.

246. (Previously presented) The semiconductor laser device according to claim 244,

wherein the optical element is a prism comprised of a first total reflecting face, a second total reflecting face, a third total reflecting face, an incidence face, an emission face, and a joining face,

wherein the first, second, and third total reflecting faces intersect each other with an intersecting angles of 60°, the incidence face and emission face are parallel and perpendicularly intersect the second total reflecting face and are inclined about 45° with respect to the first and third total reflecting faces, and the joining face is parallel to the second total reflecting face, and

wherein one of a one-dimensional array of prisms comprised of prisms are arranged adjoining each other with the third total reflecting faces, incidence faces, and emission faces on the same planes and with joining faces and second total reflecting faces of adjoining prisms joined together and a two-dimensional array comprised of one-dimensional arrays of prisms further aligned in parallel is used as the beam converter.

247. (Previously presented) The semiconductor laser device according to claim 244, wherein one of an optical glass member having parallel first and second flat surfaces, a

third flat surface intersecting the first flat surface by an angle of 135°, and a fourth surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are form continuously in a wave configuration in a direction intersecting the first flat surface by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the third flat surface, the first flat surface being used as an incidence face, the second flat surface being used as an emission face, the faces of the bent faces forming the fourth surface intersecting the first flat surface by an angle of 45° being used as a first reflecting face, the other faces being used as a second reflecting face, and the third flat surface being used as a third reflecting face, and a one-dimensional array comprised of the optical glass members further aligned linearly is used as a beam converter.

248. (Previously presented) The semiconductor laser device according to claim 244, wherein one of a mirror structure having a first flat surface intersecting a flat surface perpendicular to an incidence optical axis by an angle of 135°, a second surface comprised of a cyclically bent surface comprised of peaks and valleys having a bending angle of the line along which the peaks and valleys extend of 60°, are formed continuously in a wave configuration in a direction intersecting a flat surface perpendicular to the incidence optical axis by an angle of $\tan^{-1}(1/\sqrt{2})$, and having peak lines and valley lines parallel to the first flat surface, the first flat surface and the second surface being treated to form mirror surfaces, the faces among the bent faces forming the second surface intersecting the flat surface perpendicular to the incidence optical axis by an angle of 45° being used as a first reflecting face, the other faces being used as a second

reflecting face, and the first flat surface being used as a third reflecting face, and a one-dimensional array comprised of the mirror structures further aligned linearly is used as a beam converter.

249. (Previously presented) The semiconductor laser device according to claim 244, wherein the optical element is comprised of a pair of convex cylindrical lenses, each of the lenses having axes inclined about 45° arranged facing each other across a space of a predetermined distance.

250. (Previously presented) The semiconductor laser device according to claim 249, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

251. (Previously presented) The semiconductor laser device according to claim 244, wherein the optical element is comprised of an array of a plurality of pairs of convex cylindrical lenses, each of the lenses having an axes inclined about 45° arranged facing each other across a space of a predetermined distance.

252. (Previously presented) The semiconductor laser device according to claim 251, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the pairs of cylindrical lenses.

253. (Previously presented) The semiconductor laser device according to claim 244, wherein the optical element is a cylindrical lens having convex lens parts at the two ends of the side faces, and wherein a plurality of optical elements are joined inclined by about 45° with respect to an incidence optical axis.

254. (Previously presented) The semiconductor laser device according to claim 253, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

255. (Previously presented) The semiconductor laser device according to claim 244, wherein the beam converter is a one-dimensional array of a plurality of cylindrical lenses having convex lens parts at the two ends of the side faces joined inclined by about 45° with respect to an incidence optical axis.

256. (Previously presented) The semiconductor laser device according to claim 255, wherein a radius of curvature of emission side lenses is smaller than a radius of curvature of incidence side lenses in the convex lens parts.

257. (Previously presented) The semiconductor laser device according to claim 244, wherein the beam converter is comprised of an optical glass prism having a rectangular cross-section formed with a plurality of cylindrical surfaces inclined about 45° in the same direction as its incidence face and emission face, and wherein the converter emits incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

258. (Previously presented) The semiconductor laser device according to claim 257, wherein a radius of curvature of emission side surfaces is smaller than a radius of curvature of incidence side surfaces in the cylindrical surfaces, and wherein the angle of inclination is adjustable to emit incident beams entering its cylindrical surfaces rotated about 90° in cross-section.

208. (Previously presented) The semiconductor laser device according to claim 193, wherein the optical element is a dub prism having a trapezoidal cross-section and a plurality of the optical elements is arranged inclined by about 45°.

259. (Previously presented) The semiconductor laser device according to claim 244, wherein the optical element is comprised of two optical elements changing in power in only a direction approximately perpendicular to a center axis due to diffraction and arranged with center axes inclined about 45°.

260. (Previously presented) The semiconductor laser device according to claim 244, wherein, at the incidence side and the emission side, the beam converter is comprised of a pair of binary optic elements arranged facing each other across a space of a predetermined distance, the surfaces of the incidence side binary optic element and emission side binary optic element being formed with pluralities of axially symmetric stepped surfaces changing in depth so that the powers change symmetric to center axes inclined about 45° in directions perpendicular to the center axes, and emits incident

beams entering the axially symmetric stepped surfaces rotated about 90° in cross-section.

261. (Previously presented) The semiconductor laser device according to claim 244, wherein the optical element is comprised of an optical element comprised of a structure with continuously changing refractive indexes and changing in power only in a direction approximately perpendicular to the orientation of arrangement and is arranged inclined 45° with respect to a horizontal plane.

262. (Previously presented) The semiconductor laser device according to claim 244, wherein the beam converter is comprised of a plurality of one-dimensional profile refractive index lens elements comprised of optical glass members with refractive indexes highest at the center faces and becoming lower the closer to the side faces and joined with the center faces inclined about 45° with respect to a horizontal plane.

263. (Previously presented) The semiconductor laser device according to claim 244, wherein the beam converter is comprised of an optical glass plate on both surfaces of which are formed pluralities of semicylindrical profile refractive index lens elements inclined about 45° with respect to those surfaces, arranged facing each other in the same direction, and having refractive indexes highest at the centers of the semicylinders and the refractive indexes becoming lower the further to the outsides.

264. (Currently Amended) A semiconductor laser device comprising:

a laser diode stack array including a plurality of emitters, the emitters extending long in a first direction of emission of laser beams, arranged linearly in the first direction and provided in a plurality of rows, the emitters capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, the first condenser configured to bend and collimate the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, the first beam converter capable of receiving the laser beams collimated in the second direction, and emitting the laser beams converted to a substantially ladder rung configuration group of laser beams extending in the first direction for every one of the rows;

a second condenser provided in front of the first beam converter, the second condenser capable of bending ~~and collimating~~ the laser beams output from the first beam converter ~~in a second direction substantially at right angles to the first direction for every one of the rows~~ <u>and using the beams with center axes offset by predetermined amounts to generate beams that are emitted from approximately the same object by generating an angular change of the optical axes</u>; and

a third condenser adapted for receiving the laser beams output from the second condenser, forming images, and reducing the distance between the rows.

265. (Currently Amended) A semiconductor laser device comprising:

an arrangement which includes at least one of:

i. a laser diode stack array which includes a plurality of emitters, the emitters extending long in a first direction of emission of laser beams, arranged linearly in the first direction and provided in a plurality of rows, the emitter capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array comprising a plurality of further emitters, the further emitters extending long in a first direction of emission of laser beams, arranged linearly densely in the first direction and provided in a plurality of rows, the further emitters capable of emitting a group of laser beams comprised of laser beams substantially continuing linearly arranged in a plurality of rows;

a first condenser provided in front of the laser diode stack array, and configured for bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of dividing the group of laser beams in each row, providing in each row in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided pluralities of laser beams, receiving the group of laser beams collimated in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a second condenser provided in front of the first beam converter, and capable of bending ~~and collimating~~ the group of laser beams output from the first beam converter ~~in a second direction substantially at right angles to the first direction for every one of the rows~~ and using the beams with center axes offset by predetermined amounts to generate beams that are emitted from approximately the same object by generating an angular change of the optical axes; and

a third condenser capable of receiving the group of laser beams, forming images, and reducing the distance between rows.

266. (Previously presented) A semiconductor laser device comprising:

a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitted being arranged linearly in the first direction, provided in a plurality of rows and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, adapted for receiving the group of laser beams collimated in the second direction, and emitting the laser beams converted to a substantially ladder rung configuration group of laser beams extending in the first direction for every one of the rows;

a second condenser provided in front of the first beam converter, and capable of bending and collimating the group of laser beams output from the first beam converter in

a second direction substantially at right angles to the first direction for every one of the rows;

a fourth condenser provided in front of the second condenser, configured for receiving the substantially ladder rung configuration group of laser beams extending in the first direction of the plurality of rows, forming images, and reducing the distance between the rows; and

a third condenser configured for further reducing and reforming the image from the fourth condenser.

267. (Previously presented) The semiconductor laser device according to claim 266, further comprising an angle changer provided along at least one of the image-forming plane of the fourth condenser and in a vicinity of the image-forming plane, the angle changer being capable of changing the center optical axes of the beams to the second direction for each one of the rows to obtain the beams emitted from substantially the same object.

268. (Previously presented) A semiconductor laser device comprising:

at least one arrangement which is at least one of:

i. a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first direction, provided in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array including the emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly densely in the first direction and arranged in a plurality of rows and capable of emitting the laser beams which are substantially continuing linearly arranged in the rows;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the group of laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of dividing the laser beams in each one of the rows, providing in each row in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided pluralities of laser beams, receiving the group of laser beams collimated in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a second condenser provided in front of the first beam converter, and configured for bending and collimating the laser beams output from the first beam converter in a second direction substantially at right angles to the first direction for every one of the rows;

a fourth condenser provided in front of the second condenser, capable of receiving the substantially ladder rung configuration group of laser beams extending in the first direction of the rows, forming images, and reducing the distance between the rows; and

a third condenser configured for further reducing and reforming the image from the fourth condenser.

269. (Previously presented) The semiconductor laser device according to claim 268, further comprising an angle changer provided along at least one of the image-forming plane of the fourth condenser and in a vicinity of the image-forming plane, the angle changer being capable of changing the center optical axes of the beams to the second direction for each one of the rows to obtain the beams emitted from substantially the same object.

270. (Previously presented) The semiconductor laser device according to claim 268, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

271. (Previously presented) The semiconductor laser device according to claim 269, wherein the angle changer is an array of cylindrical lenses.

272. (Previously presented) The semiconductor laser device according to claim 268, wherein the angle changer is a segment type reflection mirror.

273. (Previously presented) A semiconductor laser device comprising:

a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first

direction, provided in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, and configured for bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of receiving the group of laser beams collimated in the second direction, and emitting the laser beams converted to a substantially ladder rung configuration group of laser beams extending in the first direction for every one of the rows;

a second condenser provided in front of the first beam converter, and capable of bending and collimating the laser beams output from the first beam converter in a second direction substantially at right angles to the first direction for every one of the rows;

a first beam compressor capable of receiving the laser beams output from the second condenser, and emitting the laser beams converted into a compressed substantially ladder rung configuration group of laser beams extending in the first direction of the rows;

a second beam compressor provided in front of the first beam compressor, and capable of emitting the laser beams output from the first beam compressor converted into a group of laser beams with shortened intervals of the rows and compressed in the second direction of the rows;

a fourth condenser configured for receiving the beams output from the second beam compressor, and making the beam divergence angle in the first direction close to the beam divergence angle of the second direction; and

a third condenser capable of condensing the group of laser beams output from the fourth condenser.

274. (Previously present) A semiconductor laser device comprising:

at least one arrangement which is at least one of:

i. a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first direction and arranged in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array provided with the emitters, extending long in the first direction of emission of the laser beams, the emitters being arranged linearly densely in the first direction, provided in the rows, and capable of emitting the laser beams comprised of laser beams substantially continuing linearly arranged in the rows;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of dividing the laser beams in each one of the rows, providing in each one of the rows, in parallel, optical elements configured for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided pluralities of laser beams, receiving the laser beams collimated in the second direction, rotating the axes of the

cross-sections of the laser beam units for each of the optical elements, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a second condenser provided in front of the first beam converter, and capable of bending and collimating the laser beams output from the first beam converter in a second direction substantially at right angles to the first direction for every one of the rows;

a first beam compressor receiving the laser beams output from the second condenser, and capable of emitting the laser beams converted into a compressed substantially ladder rung configuration group of laser beams extending in the first direction of the rows;

a second beam compressor provided in front of the first beam compressor. and capable of emitting the laser beams output from the first beam compressor converted into a group of laser beams with shortened intervals of the rows and compressed in the second direction of the rows;

a fourth condenser configured for receiving the beams output from the second beam compressor, and making the beam divergence angle in the first direction close to the beam divergence angle of the second direction; and

a third condenser configured to condense the laser beams output from the fourth condenser.

275. (Previously presented) A semiconductor laser device comprising:

a laser diode stack array provided with a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first

direction, provided in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of receiving the laser beams collimated in the second direction, and emitting the laser beams converted to a substantially ladder rung configuration group of laser beams extending in the first direction for every one of the rows;

a second condenser provided in front of the first beam converter, and capable of bending and collimating the laser beams output from the first beam converter in a second direction substantially at right angles to the first direction for every one of the rows;

a first beam compressor capable of receiving the laser beams output from the second condenser, and emitting the laser beams converted into a compressed substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the rows;

a second beam compressor provided in front of the first beam compressor, and capable of emitting the laser beams converted into a compressed group of laser beams with shortened intervals of the rows and extending in the second direction of the rows;

an angle changer provided inside at least one of the first beam compressor and the second beam compressor, and capable of changing the optical axis angles; and

a third condenser adapted for condensing the laser beams.

276. (Previously presented) The semiconductor laser device according to claim 275, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

277. (Previously presented) The semiconductor laser device according to claim 275, wherein the angle changer is an array of cylindrical lenses.

278. (Previously present) The semiconductor laser device according to claim 2275, wherein the angle changer is a segment type reflection mirror.

279. (Previously presented) The semiconductor laser device according to claim 278, wherein the beam compressors include a two-dimensional beam compressor combining functions of the first beam compressor and second beam compressor.

280. (Previously present) The semiconductor laser device according to claim 278, further comprising a second beam converter provided between the first beam compressor and the second beam compressor, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the plurality of rows, converting the laser beams to substantially ladder rung configuration laser beams extending in the second direction for each row, and as a result emitting the laser beams converted to a single row of substantially ladder rung configuration laser beams with all laser beams extending in the second direction.

281. (Previously presented) The semiconductor laser device according to claim 280, further comprising:

a second beam converter provided between the first beam compressor and the second beam compressor, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the rows, converting the laser beams to substantially ladder rung configuration laser beams extending in the second direction for each row, and as a result emitting the laser beams converted to a single row of substantially ladder rung configuration laser beams with all laser beams extending in the second direction; and

an angle changer provided in front of the second beam converter, and capable of changing the center optical axes of the laser beams to the second direction to obtain a group of beams emitted from substantially the same object.

282. (Previously presented) The semiconductor laser device according to claim 282, further comprising a fifth condenser provided between the first beam compressor and the second beam converter, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals, and extending in the first direction of the rows and emitting the laser beams bending and collimating the laser beams of each one of the rows.

283. (Previously presented) A semiconductor laser device comprising:

at least one arrangement which is at least one of:

i. a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first direction and arranged in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array including the emitters, extending long in the first direction of emission of the laser beams, the emitters being arranged linearly densely in the first direction, provided in the rows, and capable of emitting the laser beams which are substantially continuing linearly arranged in the rows;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a first beam converter provided in front of the first condenser, capable of dividing the laser beams in each one of the rows, providing in each one of the rows in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided laser beams, receiving the laser beams collimated in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a second condenser provided in front of the first beam converter, capable of bending and collimating the laser beams output from the first beam converter in a second direction substantially at right angles to the first direction for every one of the rows;

a first beam compressor capable of receiving the laser beams output from the second condenser, and emitting the laser beams converted into a compressed substantially ladder rung configuration group of laser beams extending in the first direction of the rows;

a second beam compressor provided in front of the first beam compressor, and capable of emitting the laser beams output from the first beam compressor converted into a compressed group of laser beams with shortened intervals of the rows and extending in the second direction of the rows;

an angle changer provided inside at least one of the first beam compressor and the second beam compressor, and capable of changing the optical axis angles; and

a third condenser capable of condensing the group of laser beams.

284. (Previously presented) The semiconductor laser device according to claim 281, wherein the beam compressors include a two-dimensional beam compressor combining functions of the first beam compressor and second beam compressor.

285. (Previously presented) The semiconductor laser device according to claim 281, further comprising a second beam converter provided between the first beam compressor and the second beam compressor, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in

the first direction of the plurality of rows, converting the laser beams to substantially ladder rung configuration laser beams extending in the second direction for each row, and as a result emitting the laser beams converted to a single row of substantially ladder rung configuration laser beams with all laser beams extending in the second direction.

286. (Previously presented) The semiconductor laser device according to claim 285, further comprising:

a second beam converter provided between the first beam compressor and the second beam compressor, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals and extending in the first direction of the rows, converting the laser beams to substantially ladder rung configuration laser beams extending in the second direction for each row, and as a result emitting the laser beams converted to a single row of substantially ladder rung configuration laser beams with all laser beams extending in the second direction; and

an angle changer provided in front of the second beam converter, and capable of changing the center optical axes of the laser beams to the second direction to obtain a group of beams emitted from substantially the same object.

287. (Presently amended) The semiconductor laser device according to claim 286, further comprising a fifth condenser provided between the first beam compressor and the second beam converter, capable of receiving the substantially ladder rung configuration group of laser beams with shortened ladder rung intervals, and extending in the first direction of

the rows[[.]] and emitting the laser beams bending and collimating the laser beams of each one of the rows.

288. (Previously presented) The semiconductor laser device according to claim 281, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

289. (Previously presented) The semiconductor laser device according to claim 281, wherein the angle changer is an array of cylindrical lenses.

290. (Previously presented) The semiconductor laser device according to claim 281, wherein the angle changer is a segment type reflection mirror.

291. (Previously presented) A semiconductor laser device comprising:

a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitters being arranged linearly in the first direction, provided in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a second beam compressor provided in front of the first condenser, capable of receiving the laser beams collimated in the second direction, and emitting the laser

beams converted into a group of laser beams with compressed distances between optical axes in the second direction;

a first beam converter provided in front of the second beam compressor, capable of dividing the laser beams in each one of the rows, providing in each one of the rows in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided pluralities of laser beams, receiving the laser beams collimated in the second direction and compressed in distance between optical axes in the second direction, rotating the axes of the cross-sections of the laser beam units for each of the optical elements, and emitting the beams as a substantially ladder rung configuration group of laser beams extending in the first direction using the divided pluralities of laser beams as units;

a first beam compressor provided in front of the first beam converter, and capable of emitting the laser beams converted into a group of laser beams compressed in the first direction;

a second condenser provided in front of the first beam compressor, and capable of making the beam divergence angle of the first direction close to the divergence angle of the second direction; and

a third condenser configured for condensing the laser beams.

292. (Previously presented) A semiconductor laser device comprising:

an arrangement which includes at least one of:

i. a laser diode stack array including a plurality of emitters, extending long in a first direction of emission of laser beams, the emitter being arranged linearly

in the first direction and arranged in a plurality of rows, and capable of emitting a group of laser beams having laser beam elements arranged in a two-dimensional array, and

ii. a laser diode stack array including the emitters that extend along the first direction of emission of laser beams, the emitters being arranged linearly densely in the first direction in the rows, and capable of emitting the laser beams comprised of laser beams substantially continuing linearly arranged in the rows;

a first condenser provided in front of the laser diode stack array, and capable of bending and collimating the laser beams for every one of the rows in a second direction substantially at right angles to the first direction;

a second beam compressor provided in front of the first condenser, capable of receiving the laser beams collimated in the second direction, and emitting the laser beams converted into a group of laser beams with compressed distances between optical axes in the second direction;

a first beam converter provided in front of the second beam compressor, capable of dividing the laser beams in each row, providing in each one of the rows in parallel optical elements for bending the axes of the cross-sections of the laser beam units to substantially right angles using as units the divided laser beams, receiving the laser beams collimated in the second direction and compressed in distance between optical axes in the second direction, rotating the axes of the cross-sections of the laser beam units for each optical element, and emitting the beams as a substantially ladder rung

configuration group of laser beams extending in the first direction using the divided laser beams as units;

a first beam compressor provided in front of the first beam converter, and capable of emitting the laser beams converted into a group of laser beams compressed in the first direction;

a second condenser provided in front of the first beam compressor, and capable of making the beam divergence angle of the first direction close to the divergence angle of the second direction; and

a third condenser configured for condensing the laser beams.

293. (Previously presented) The semiconductor laser device according to claim 292, further comprising a fifth condenser provided between the second beam compressor and the first beam converter, capable of receiving a further group of laser beams with distances between optical axes in the second direction compressed, and emitting the further laser beams of each one of the rows bent and collimated in the second direction.

294. (Previously presented) The semiconductor laser device according to claim 293, wherein the fifth condenser is a cylindrical lens.

295. (Previously presented)The semiconductor laser device according to claim 293, further comprising an angle changer situated in front of the second beam compressor changing the center optical axes of the laser beams to obtain a group of beams emitted from substantially the same object.

296. (Previously presented) The semiconductor laser device according to claim 293, wherein the angle changer is one of an inclined transparent plate and an array of wedge prisms.

297. (Previously presented) The semiconductor laser device according to claim 293, wherein the angle changer is an array of cylindrical lenses.

298. (Previously presented) The semiconductor laser device according to claim 293, wherein the angle changer is a segment type reflection mirror.

299. (New) The semiconductor laser device according to claim 69, wherein the second condenser is also adopted for collimating the group of laser beams in a second direction substantially at right angles to the first direction for every one of the rows and the first beam compressor is located in front of the second converter.

300. (New) The semiconductor laser device according to claim 116, wherein the second condenser is also adopted for collimating the group of laser beams in a second direction substantially at right angles to the first direction for every one of the rows and the first beam compressor is located in front of the second converter.

301. (New) The semiconductor laser device according to claim 163, wherein the second condenser is also adopted for collimating the group of laser beams in a second direction

substantially at right angles to the first direction for every one of the rows and the first beam compressor is located in front of the second converter.

302. (New) The semiconductor laser device according to claim 214, wherein the second condenser is also adopted for collimating the group of laser beams in a second direction substantially at right angles to the first direction for every one of the rows and the first beam compressor is located in front of the second converter.

303. (New) The semiconductor laser device according to claim 264, wherein the second condenser is also adopted for collimating the group of laser beams in a second direction substantially at right angles to the first direction for every one of the rows